

# RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE

☐ OTHER (SPECIFY) 314 234 7716

(Record of item checked above)

TO:

Harold Relhop  
McDonnell Aircraft

FROM:

Joe Galbraith

DATE

3/19/85

TIME

3:20pm

SUBJECT

20 mm Ammo (letter fm TE Wehling to R. Morby 1/31/85)

## SUMMARY OF COMMUNICATION

I told McDonnell Douglas that a consensus of permit writers had decided that 20 mm ammo was reactive. I explained that I delayed an answer to his question until I was sure that the opinion was in fact universal and thus consistency would be maintained.

I also explained that McDonnell Douglas did have the option to pursue the issue to John Skinner's office if they so desired.

## CONCLUSIONS, ACTION TAKEN OR REQUIRED

A letter confirming the information transmitted to McDonnell Douglas will be drafted within one week.



R00136612

RCRA RECORDS CENTER

## INFORMATION COPIES

TO: MS, LH.

790HMC-0185-10  
31 January 1985

Subject: Classification Of Small Arms Ammunition With Respect To Reactivity

Mr. Bob Morby  
EPA Region 7  
Waste Management Branch  
324 East 11th St.  
Kansas City, MO 64106

Dear Mr. Morby:

McDonnell Douglas Corp - St. Louis generates 20mm ammunition as a waste. These shells have been cycled through the gatling gun on the F-15 or F-18 and have been dented. We generate approximately 2000 rounds per year. We have been accumulating this waste ammunition since the RCRA regulations went into effect in 1980.

The 20mm ammunition we wish to dispose of is target practice. The ammunition in accordance with CFR 49 Para 173.86 has been classified as "Small Arms Ammunition", Class C Explosive. There is no tracer, incendiary, or explosive charge in this ammunition. There are only two (2) explosive components in the 20mm ammunition, the primer and smokeless powder.

The primer in our 20mm ammunition is similar to the primer in 0.50 caliber ammunition. The smokeless powder is also similar to the smokeless powder in 0.50 caliber ammunition. The only difference is the amount of powder. A 0.50 caliber round has 0.542 ounces per round and 20mm ammunition has 1.429 ounces per round.

McDonnell Douglas Corp based upon enclosed letter is requesting that 20mm target practice ammunition be classified as being not "Reactive" within the meaning to title 40 part 261.

Please forward your correspondence on the subject matter to my attention. Thanking you in advance.

Sincerely,

*Sheila M. Johnson for*

T.E. Wehling, Senior Engineer  
Hazardous Materials Control  
790/250/2/A6/234-7722

TEW:tb

CC: Betti Harris

Encl: Memorandum of John H. Skinner dtd 30 Nov 84 on same subject

*EPA-ARWM/WML*  
*FEB 02 1985*  
*Region VII*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

30 NOV 1984

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Classification of Small Arms Ammunition .  
With Respect to Reactivity

FROM: John H. Skinner, Director  
Office of Solid Waste (WH-562)

*John H. Skinner*

TO: David Wagoner, Director  
Air & Waste Management Division  
Region VIII

Recently, a question arose as to the status under RCRA of off-specification small arms ammunition (ball or sporting ammunition of calibers up to and including 0.50) intended for disposal. The issue concerned whether such wastes are "reactive wastes" within the meaning of 40 CFR 261.23(a)(6) and, therefore, subject to RCRA hazardous waste requirements. Because the ammunition contains an ignition source that may be shock and heat sensitive and is designed to generate high pressure during use, it had been our opinion that it is probably "reactive." However, on the basis of information that was received from the Remington Arms Company and the Army, we now conclude that such materials are not "reactive" within the meaning of 40 CFR 261.23 (a)(6).

Section 261.23 (a)(6) of Title 40 provides that a solid waste which is "capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement" is "reactive." As discussed in the May 19, 1980, preamble to 40 CFR 261.23, shock and thermal instability are important elements of this definition. While presently there is no Agency guidance regarding these criteria, the Remington Arms Company of Independence, Missouri, and the U.S. Army have provided information which addresses both of these factors.

Remington Arms Company submitted details on the effects of heat and impact to small arms ammunition. There was no explosion when a box of ammunition was set afire. Small arms, when subjected to the SAAMI (Sporting Arms and Ammunition Manufacturer's Institute) Impact Test, showed no evidence of mass propagation or explosion.

The Department of the Army has a rigorous safety and hazard testing program on all munition items. The tests, which include drop tests from 5, 7, and 40 feet to simulate handling errors and "heating under confinement," 160°F for 48 hours, also showed no evidence of detonation or explosion with respect to small arms ammunition. The tests were performed on both the individual munition and a package containing a prescribed number of items.

As noted above, we feel that results from these tests show that off-specification small caliber ammunition up to and including 0.50 is not "reactive" within the meaning of 40 CFR §261.23 (a)(6). We, therefore, believe that the disposal of such ammunition is not subject to Subtitle C hazardous waste requirements.

We appreciate your cooperation. If you have any questions regarding the matter, please call David Friedman or Florence Richardson at FTS 382-4770.

cc: Air & Waste Management Divisions Directors,  
Regions I-VI and VIII-X